

Patent claims What is claimed is?

1. Process for the preparation of non-chiral or optically active alcohols in which a carbonyl compound is reacted with hydrogen in the presence of a catalyst, a base and optionally a diamine, characterized in that the catalyst used is an Ru(II) complex which contains both a support-bonded bisphosphine ligand and also a diamine ligand.

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2. Process according to Claim 1, characterized in that the catalyst is formed in situ from a support-bonded precursor and a diamine.

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3. Process according to Claim 1, characterized in that a catalyst is used which contains both a chirally uniform, support-bonded bisphosphine ligand and also a chirally uniform diamine ligand.

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4. Process according to Claim 3, characterized in that an atropisomeric bisphosphine ligand is present in the catalyst.

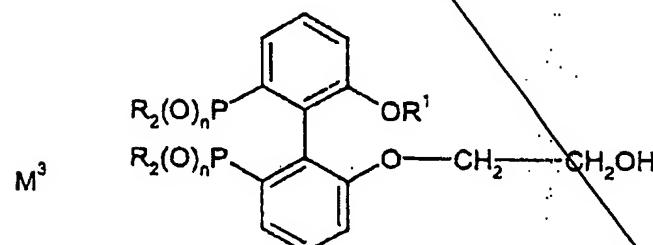
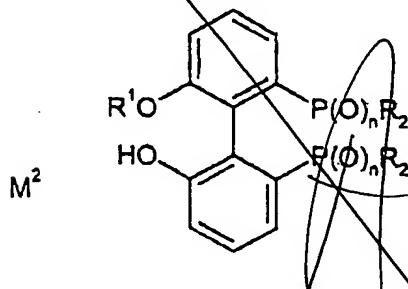
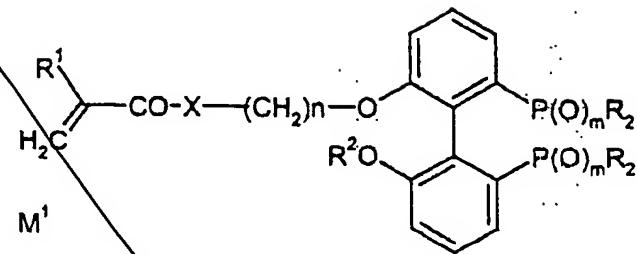
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5. Ru(II) complex catalyst, characterized in that the Ru complex contains a support-bonded bisphosphine ligand and a diamine ligand.

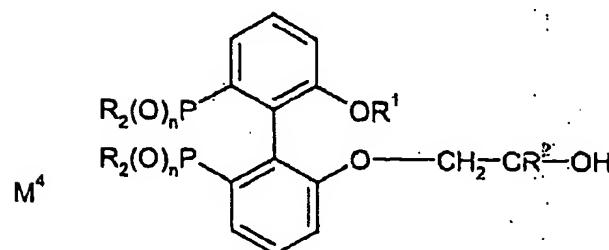
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6. Ru(II) complex catalyst, characterized in that the Ru catalyst has been obtained by linking an inorganic support containing SH groups with a bisphosphine (derivative) capable of polymerization.

7. Compounds of the formulae  $M^1$ ,  $M^2$ ,  $M^3$ ,  $M^4$ ,  $M^5$ ,  $M^6$ ,  $M^7$ ,  $M^8$ ,  $M^9$ ,  $M^{10}$ ,  $M^{11}$  and  $M^{12}$ ,



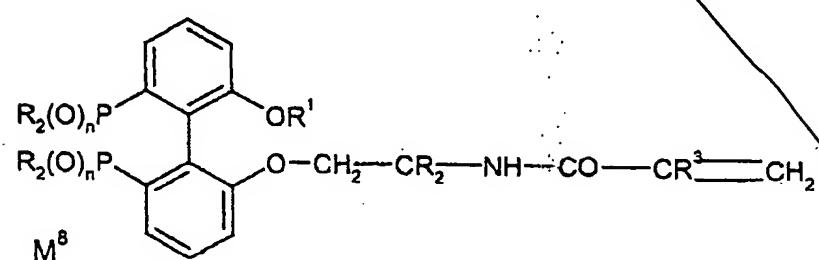
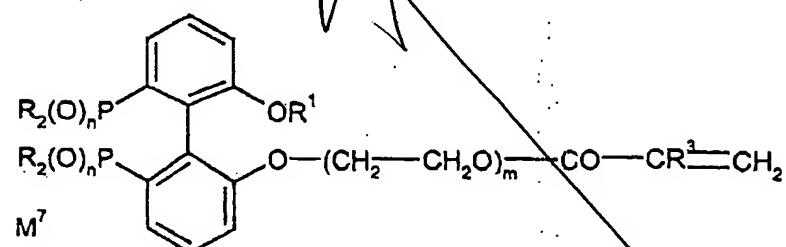
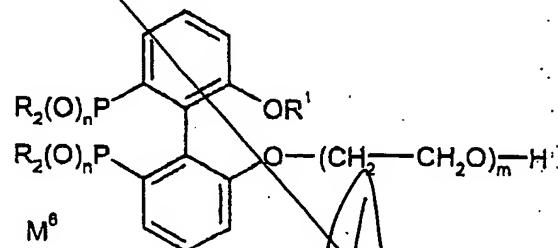
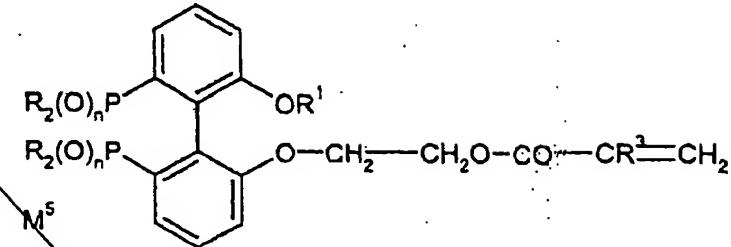
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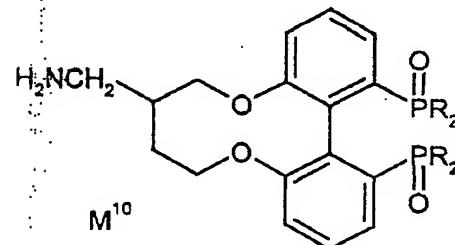
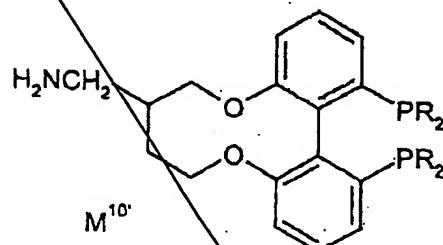
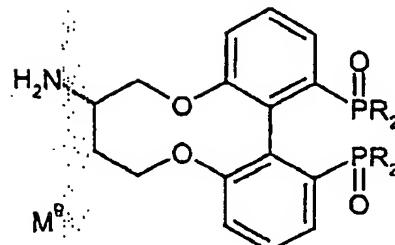
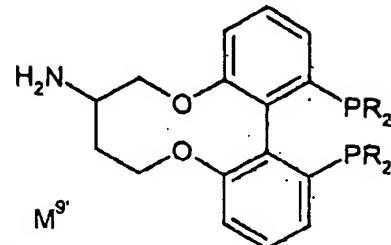


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T. D. DESSLER / J. CLIMATE

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wherein independently of one another each

R is phenyl, 2- or 3- or 4-methylphenyl, 3,5-dimethylphenyl, 3,5-dimethyl-4-methoxyphenyl, 3,5-diter-butylphenyl or cyclohexyl, and

R<sup>1</sup> and R<sup>2</sup> are in each case, independently of one another, C<sub>1</sub>- to C<sub>8</sub>-(cyclo)alkyl and

15 R<sup>3</sup> is H or CH<sub>3</sub>, and

n is 1 or zero, and

m is 2-100.

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